



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,569	02/27/2002	Ahmad R. Ansari	X-987 US	7959
24309	7590	07/15/2005	EXAMINER	
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			CERULLO, JEREMY S	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/084,569	Applicant(s) ANSARI ET AL.	
	Examiner Jeremy S. Cerullo	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 10-29 is/are allowed.
- 6) ☒ Claim(s) 7-9 and 30-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>20050707</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20050126</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. Claims 1-34 are pending in the following action.

Information Disclosure Statement

2. The information disclosure statement filed 26 January 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 30-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. As for Claim 30, the limitation in the last two lines of the claim,

...wherein the memory device comprises a memory portion storing data that defines arbitration logic and clock generation logic for the bus...

is not enabled by the specification. While Figure 9 does show a memory storing arbitration logic, the storing of clock generation logic is not disclosed.

6. Claims 31-34 are rejected based on their dependency on Claim 30.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2112

9. Claim 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billings et al. (U.S. Patent No. 5,867,694) as applied to claims 5-6 above, and further in view of Summer, Jr. et al. (U.S. Patent No. 4,414,624).

10. As for Claim 7, Billings teaches determining bus frequency, comparing the internal clock frequency to the frequency of the bus, generating sample cycle signals, and latching data onto the bus (See Figure 4 and Column 1, Line 61 – Column 2, Line 8). However, Billings does not teach generating a request for access or control of the bus, receiving a grant from a bus arbiter, or the issuing of a release signal upon termination of the transaction. Summer, Jr., does teach these limitations. In Figure 3, Summer, Jr., teaches arbitration scheme that includes a bus request, a grant assertion to said request, and clear grant signal that releases the bus. These steps are equivalent to the limitations in Claim 7 of the instant application that are not taught by Billings et al. One of ordinary skill in the art at the time of the invention would have been motivated to combine the arbitration method of Summer, Jr., with the timing method of Billings in order to allow for a synchronized arbitration method capable of utilizing multiple devices with varying clock frequencies. (Summer: Column 1, Lines 26-41).

11. As for Claim 9, Billings et al. also teaches that the sample signal is used to indicate when data is to be latched and that data can be written after the sample signal goes low. See Figure 4 of reference.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Billings et al. and Summer, Jr., et al. as applied to claim 7 above, and further in view of Butler, Jr.,

Art Unit: 2112

et al. (U.S. Patent No. 3,708,686). Billings and Summer do not teach the additional limitation of determining the relative difference between the internal clock frequency and the bus clock frequency by counting the falling edges of the clock cycles for the internal clock in two periods of the bus clock. However, Butler does teach that a count of the number of initiations of a clock signal within any fixed time interval provides a measure of the difference between the frequencies of the two clocks (Column 18, Lines 9-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of comparing clocks according to Butler, Jr., within the communication method taught by Billings and Summer, Jr. One would have been motivated to use the fixed time period in order to have a consistent measurement of the clock frequencies for comparison (Summer: Column 17, Line 50 – Column 18, Line 15).

Allowable Subject Matter

13. The following is a statement of reasons for the indication of allowable subject matter:

14. In light of the Applicant's arguments and amendments to Claims 1, 10, and 21, said claims are considered allowable. In particular, the limitation in the claims that the bus frequency is set/selected according to a transaction, rather than according to the devices participating in the transaction, distinguishes Claims 1, 10, and 21 from the prior art of record, and therefore Claims 1, 10, and 21 are considered allowable.

15. Claims 2-4 are considered allowable based on their dependency on Claim 1.

Art Unit: 2112

16. Claims 11-18 are considered allowable based on their dependency on Claim 10.

17. Claims 22-29 are considered allowable based on their dependency on Claim 21.

18. In light of the Applicant's arguments and amendments to Claims 5 and 19, said claims are considered allowable. In particular, the limitation in the claims that sample cycle pulse generation (Claim 5) and determining when to latch a communication signal (Claim 19) are performed with respect to the ratio of a device's internal clock frequency and the bus frequency distinguishes Claims 5 and 19 from the prior art of record, and Claims 5 and 19 are considered allowable.

19. Claim 6 is considered allowable based on its dependency on Claim 5.

20. Claim 20 is considered allowable based on its dependency on Claim 19.

Response to Arguments

21. Applicant's arguments, see Pages 13-14, filed 26 January 2005, with respect to Claims 5-6 and 19 have been fully considered and are persuasive. The rejection of 5-6 and 19-20 has been withdrawn.

22. Applicant's arguments, see Pages 14-15, filed 26 January 2005, with respect to 10-12, 14-15, and 17 have been fully considered and are persuasive. The rejection of 10-18 has been withdrawn.

Art Unit: 2112

23. Applicant's arguments, see Pages 16-17, filed 26 January 2005, with respect to Claims 1-4, 16, and 21-26 have been fully considered and are persuasive. The rejection of Claims 1-4, 16, and 21-29 has been withdrawn.

24. Applicant's arguments for Claims 13, 18, 20, and 27-29 have been considered but are rendered moot in view of the allowable subject matter in the claims from which they depend.

25. Applicant's arguments filed 26 January 2005 regarding Claims 7-9 have been fully considered but they are not persuasive.

26. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation to combine the references for the rejection of Claim 7 (See above rejection) is provided by Summer (Column 1, Lines 26-41). Also, motivation to combine the references for the rejection of Claim 8 (See above rejection) is provided by Summer (Column 17, Line 50 – Column 18, Line 15).

27. Applicant's arguments with respect to claims 30-34 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 7:00-4:30; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JSC


REHANA PERVEEN
PRIMARY EXAMINER
7/8/05